

CLAIMS

What is claimed is:

1. A method of visually locating a memory module, the method comprising:  
5 receiving an electronic communication by circuitry on the memory module  
to be visually located;  
activating a beacon state in the memory module due to receipt of the  
electronic communication; and  
electronically turning on a beacon device on the memory module when  
10 the beacon state is activated to draw attention to that memory  
module.
2. The method of claim 1, wherein the beacon device comprises a light  
emitting diode (LED).
- 15 3. The method of claim 1, wherein the beacon device comprises an  
electromechanical device that remains activated even in the absence of  
power.
- 20 4. The method of claim 1, wherein the electronic communication is sent by a  
memory error interface on a system board.
5. The method of claim 1, wherein the beacon state is activated by  
programming a flag bit in a register on the memory module.
- 25 6. The method of claim 1, further comprising, prior to receiving the electronic  
communication:  
detecting a memory error;  
determining a logical memory module number of the memory error; and  
30 sending the electronic communication to the memory module  
corresponding to the logical memory module number.
7. The method of claim 1, further comprising:

using a software application configured with capability to initiate sending the electronic communication to the memory module.

8. The method of claim 7, wherein the software application comprises a type of application from a group of types including manageability applications and diagnostic applications.
9. The method of claim 1, wherein the electronic communication is sent from self-diagnostic circuitry on the memory module.
10. An apparatus to visually locate a memory module in a memory system with a plurality of memory modules, the apparatus comprising:  
a system board including a memory controller and a plurality of memory module slots on the system board; and  
a plurality of memory modules seated in the plurality of memory module slots; and  
a beacon unit on a memory module with a beacon device and control circuitry for turning on the beacon device when an electronic communication to turn on the beacon device is received by that memory module.
11. The apparatus of claim 10, wherein the beacon device comprises a light emitting diode (LED).
12. The apparatus of claim 10, wherein the beacon device comprises an electromechanical device that remains activated even in the absence of power.
13. The apparatus of claim 10, wherein the memory modules comprise dual in-line memory modules (DIMMs).
14. The apparatus of claim 10, wherein the memory modules comprise single in-line memory modules (SIMMs).

15. The apparatus of claim 10, wherein the memory modules comprise Rambus in-line memory modules (RIMMs).
- 5 16. The apparatus of claim 10, wherein the system board comprises a computer motherboard.
- 10 17. The apparatus of claim 10, wherein the system board comprises a cell board.
- 15 18. The apparatus of claim 10, further comprising a memory error interface unit on the system board that is configured to send the appropriate electronic communication to the memory module.
- 20 19. The apparatus of claim 18, further comprising a manageability processor communicatively coupled to the memory error interface.
- 25 20. The apparatus of claim 19, wherein the manageability processor is compatible with an intelligent platform management interface (IPMI).
- 30 21. The apparatus of claim 10, wherein the electronic communication is sent by the memory controller to the memory module.
22. The apparatus of claim 10, wherein the beacon unit further comprises a second beacon device and control circuitry for turning on the second beacon device.
23. The apparatus of claim 22, wherein the beacon device and the second beacon device are of different colors to visually distinguish them.
24. The apparatus of claim 10, wherein each of the memory modules includes a corresponding beacon unit.

25. The apparatus of claim 10, further comprising a software application configured with capability to initiate sending the electronic communication to the memory module.

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26. The apparatus of claim 10, further comprising self-diagnostic circuitry on the memory module that is configured with capability to turn on the LED on that memory module.

- 10 27. A system for visually locating a memory module, the system comprising:  
means for receiving an electronic communication by circuitry on the  
memory module to be visually located;  
means for activating a beacon state in the memory module due to receipt  
of the electronic communication; and  
15 means for electronically turning on a beacon device on the memory  
module when the beacon state is activated to draw attention to that  
memory module.

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